

US 20140321342A1

(19) United States

(12) **Patent Application Publication** Kalyanasundaram et al.

(10) **Pub. No.: US 2014/0321342 A1** (43) **Pub. Date: Oct. 30, 2014**

(54) METHODS AND APPARATUS FOR COMMUNICATION SCHEDULING

(71) Applicant: **NOKIA SIEMENS NETWORKS OY**,

Espoo (FI)

(72) Inventors: Suresh Kalyanasundaram, Bangalore

(IN); Balamurali Natarajan, Bangalore (IN); Joseph Lester, Chandler, AZ (US)

(73) Assignee: **Nokia Siemens Networks Oy**, Espoo

(FI)

- (21) Appl. No.: 13/871,175
- (22) Filed: Apr. 26, 2013

Publication Classification

(51) **Int. Cl. H04W 72/12** (2006.01) **H04W 76/04** (2006.01)

(52)	U.S. Cl.				
	CPC	H04W 72	/1205 (20	13.01); <i>H</i>	<i>94W 76/048</i>
					(2013.01)
	USPC				370/311

(57) ABSTRACT

Systems and techniques for discontinuous reception management for user devices communicating using carrier aggregation. Information relating to discontinuous reception for a user device is received and used to determine discontinuous reception states of the user device. The information relating to discontinuous reception may include, for example, past scheduling information, information received at one scheduler and reporting scheduling information for another scheduler, or discontinuous reception information managed at a media access control layer of a base station. The discontinuous reception information may be used for scheduling of a plurality of carriers used for carrier aggregation by a user device, with scheduling for each carrier being performed by a scheduler dedicated to that carrier.

